Information Resource Center
IRC

Environment – Documents on the Web – Spring 2011

GOVERNMENT DOCUMENTS

FUKUSHIMA DAIICHI INCIDENT AND NUCLEAR HAZARDS

EFFECTS OF RADIATION FROM FUKUSHIMA DAIICHI ON THE U.S. MARINE ENVIRONMENT
Congressional Research Service (CRS). April 15, 2011. 8 pages.
http://www.fas.org/sgp/crs/misc/R41751.pdf
The massive Japanese earthquake and tsunami of March 11, 2011, caused extensive damage to the Fukushima Daiichi nuclear power installation in northeastern Japan, resulting in the release of radiation. Concerns have arisen about the potential effects of this released radiation on U.S. marine environment and resources. Both ocean currents and atmospheric winds have the potential to transport radiation over and into marine waters under U.S. jurisdiction. It is unknown whether marine organisms that take up radiation in Japanese waters may subsequently migrate to where they may be harvested by U.S. commercial fishermen.

THE JAPANESE NUCLEAR INCIDENT: TECHNICAL ASPECTS
Congressional Research Service (CRS). April 5, 2011. 21 pages.
http://www.fas.org/sgp/crs/misc/R41728.pdf
Japan's nuclear incident has engendered much public and congressional concern about the possible impact of radiation on the Japanese public, as well as possible fallout on U.S. citizens. This report provides information on technical aspects of the nuclear incident, with reference to human health. While some radioactive material from the Japanese incident may reach the United States, it appears most unlikely that this material will result in harmful levels of radiation. In traveling thousands of miles between the two countries, some radioactive material will decay, rain will wash some out of the air, and its concentration will diminish as it disperses.

NUCLEAR POWER PLANT SITES: MAPS OF SEISMIC HAZARDS AND POPULATION CENTERS
Congressional Research Service (CRS). March 29, 2011. 10 pages.
http://www.fas.org/sgp/crs/misc/R41729.pdf
Currently, 104 commercial nuclear power plants operate on 64 sites in the 48 contiguous United States. Sixty-nine of the 104 are pressurized water reactors (PWR) and the 35 remaining are boiling water reactors (BWR). The PWR plants are based on Babcock & Wilcox, Combustion Engineering, and Westinghouse designs. The BWR plants are based on a series of General Electric designs. The Nuclear

Regulatory Commission (NRC) has received 28 Combined License (COL) applications for new reactors based on advanced reactor designs. Three COL applications will involve new sites.

CLIMATE CHANGE -- GLOBAL ISSUES

CHANGES IN THE ARCTIC: BACKGROUND AND ISSUES FOR CONGRESS
Congressional Research Service (CRS). April 7, 2011. 71 pages.
http://www.fas.org/sgp/crs/misc/R41153.pdf
Record low extent of Arctic sea ice in 2007 focused scientific and policy attention on its linkage to global climate change, and to the implications of projected ice-free seasons in the Arctic within decades. The Arctic has been projected by several scientists to be perennially ice-free in the late summer by the late 2030s. The diminishment of Arctic sea ice has led to increased human activities in the Arctic, and has heightened interest in, and concerns about, the region's future. The United States, by virtue of Alaska, is an Arctic country and has substantial interests in the region. The Arctic has increasingly become a subject of discussion among political leaders of the nations in the region.

U.S. GLOBAL CLIMATE CHANGE POLICY: EVOLVING VIEWS ON COST, COMPETITIVENESS, AND COMPREHENSIVENESS
Congressional Research Service (CRS). February 24, 2011. 18 pages.
http://www.fas.org/sgp/crs/misc/RL30024.pdf
The nature of greenhouse gas (GHG) emissions (particularly carbon dioxide (CO2) emissions) makes their control difficult to integrate with the U.S economy and traditional U.S. energy policy. Despite the obvious interrelationship between energy policy and greenhouse gas emissions, the United States has struggled to integrate the two. For a country that has traditionally used its relatively cheap supply of energy to substitute for more expensive labor and capital costs to compete internationally, this linkage is particularly strong, as witnessed by the nation's high GHG emissions per capita. In the face of this economic reality, along with continuing scientific uncertainty, debate over a greenhouse gas reduction program can be categorized by three inter-related Cs: Cost, Competitiveness, and Comprehensiveness. Fundamental policy assumptions regarding each of the three Cs have changed between the U.S. ratification of the 1992 UNFCCC and the 2009 negotiations at Copenhagen.

CLIMATE CHANGE ISSUES: OPTIONS FOR ADDRESSING CHALLENGES TO CARBON OFFSET QUALITY
Government Accountability Office (GAO). February 2011. 42 pages.
http://www.gao.gov/new.items/d11345.pdf
Carbon offsets are reductions in greenhouse gas emissions in one place to compensate for emissions elsewhere. Examples of offset projects include planting trees, developing renewable energy sources, or capturing emissions from landfills. Recent congressional proposals would have limited emissions from utilities, industries, or other "regulated entities," and allowed these entities to buy offsets. Research suggests that offsets can significantly lower the cost of a program to limit emissions because buying offsets may cost regulated entities less than making the reductions themselves. Some existing international and U.S. regional programs allow offsets to be used for compliance with emissions limits. A number of voluntary offset programs also exist, where buyers do not face legal requirements but may buy offsets for other reasons. Prior GAO work found that it can be difficult to ensure offset quality --

that offsets achieve intended reductions. One quality criterion is that reductions must be "additional" to what would have occurred without the offset program. This report provides information on key challenges in assessing the quality of different types of offsets and options for addressing key challenges associated with offset quality if the U.S. adopted a program to limit emissions.

CLIMATE CHANGE -- DOMESTIC ISSUES

FEDERAL AGENCY ACTIONS FOLLOWING THE SUPREME COURT'S CLIMATE CHANGE DECISION: A CHRONOLOGY

Congressional Research Service (CRS). April 6, 2011. 12 pages.
http://www.fas.org/sgp/crs/misc/R41103.pdf

On April 2, 2007, the Supreme Court rendered one of its most important environmental decisions of all time. In Massachusetts v. EPA, the Court held that greenhouse gases (GHGs), widely viewed as contributing to climate change, constitute "air pollutants" as that phrase is used in the Clean Air Act (CAA). As a result, said the Court, the U.S. Environmental Protection Agency (EPA) had improperly denied a petition seeking CAA regulation of GHGs from new motor vehicles by saying the agency lacked authority over such emissions. This report presents a chronology of major federal agency actions, mainly by EPA, in the wake of Massachusetts v.

RECOVERY ACT: ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANT RECIPIENTS FACE CHALLENGES MEETING LEGISLATIVE AND PROGRAM GOALS AND REQUIREMENTS

Government Accountability Office (GAO). April 2011. 73 pages.
http://www.gao.gov/new.items/d11379.pdf

The American Recovery and Reinvestment Act of 2009 (Recovery Act) provided $3.2 billion for the Department of Energy's (DOE) Energy Efficiency and Conservation Block Grant Program (EECBG) to develop and manage projects to improve energy efficiency and reduce energy use and fossil fuel emissions. The Recovery Act requires GAO to review funds made available under the act and to comment on recipients' estimates of jobs created or retained. GAO examined: how EECBG recipients used EECBG funds and challenges they faced, if any; DOE and recipients' oversight and monitoring activities and challenges, if any; the extent to which the EECBG program is meeting Recovery Act and program goals for energy savings; and the quality of jobs data reported by Recovery Act recipients, particularly EECBG recipients. GAO also updates the status of open recommendations from previous bimonthly and recipient reporting reviews.

RENEWABLE ENERGY AND ENERGY EFFICIENCY INCENTIVES: A SUMMARY OF FEDERAL PROGRAMS

Congressional Research Service (CRS). March 22, 2011. 58 pages.
http://www.fas.org/sgp/crs/misc/R40913.pdf

Energy is crucial to the operation of a modern industrial and services economy. Recently, there have been growing concerns about the availability and cost of energy and about environmental impacts of fossil energy use, especially global climate change. Those combined concerns have rekindled interest in energy efficiency, energy conservation, and the development and commercialization of renewable energy technologies. This report describes federal programs that provide grants, loans, loan guarantees, and

other direct or indirect regulatory incentives for energy efficiency, energy conservation, and renewable energy. For each program, the report provides the administering agency, authorizing statute(s), annual funding, and the program expiration date. The appendixes provide summary information in a tabular format.

DEPARTMENT OF ENERGY: ADVANCED TECHNOLOGY VEHICLE LOAN PROGRAM IMPLEMENTATION IS UNDER WAY, BUT ENHANCED TECHNICAL OVERSIGHT AND PERFORMANCE MEASURES ARE NEEDED
Government Accountability Office (GAO). February 2011. 39 pages.
http://www.gao.gov/new.items/d11145.pdf
In the Energy Independence and Security Act of 2007, Congress mandated higher vehicle fuel economy by model year 2020 and established the Advanced Technology Vehicles Manufacturing (ATVM) loan program in the Department of Energy (DOE). ATVM is to provide up to $25 billion in loans for more fuel-efficient vehicles and components. Congress also provided $7.5 billion to pay the required credit subsidy costs -- the government's estimated net long-term cost, in present value terms, of the loans. GAO was asked to review the ATVM program and agreed to identify the steps DOE has taken to implement the program, examine the program's progress in awarding loans, assess how the program is overseeing the loans, and evaluate the extent to which DOE can assess progress toward meeting its goals.

NATURAL RESOURCES

ENERGY-WATER NEXUS: AMOUNT OF ENERGY NEEDED TO SUPPLY, USE, AND TREAT WATER IS LOCATION-SPECIFIC AND CAN BE REDUCED BY CERTAIN TECHNOLOGIES AND APPROACHES
Government Accountability Office (GAO). March 2011. 35 pages.
http://www.gao.gov/new.items/d11225.pdf
Providing drinking water and wastewater services are two key functions needed to support an urban lifestyle. To provide these services, energy is needed to extract, use, and treat water and wastewater. As the demand for water increases, the energy demands associated with providing water services are similarly expected to grow. GAO was asked to describe what is known about the energy needed for the urban water lifecycle and technologies and approaches that could lessen the energy needed for the lifecycle and barriers that exist to their adoption. GAO selected three cities -- Memphis, Tennessee; San Diego, California; and Washington, D.C. -- as illustrative case studies to help understand the energy demands of the lifecycle in different areas of the country.

THE LOOMING FOOD CRISIS
David Dapice. Yale Center for the Study of Globalization. February 18, 2011.
http://yaleglobal.yale.edu/content/looming-food-crisis
In wealthy nations as well as in poor ones, consumers express alarm about fast-rising food prices, and their governments are well aware that shortages can quickly translate into unrest and political crisis. Complaints today may be mild compared with those looming ahead unless governments take steps to curb policies that encourage speculation, warns the author. Subsidies that divert corn to ethanol fuel reduce food supplies and add to price rise. Despite extreme weather events in some exporting nations, per-capita food production has climbed in recent years, he explains, adding that low interest rates

encourage speculation, stockpiling and waste. Price hikes are less noticeable for wealthiest consumers whose products carry high marketing and packaging costs, but for the poor it's a question of survival. Research and technology advances in the agriculture industry may sustain a growing population for only so long. Failure to address the needs of the poor could risk security for all.

ENVIRONMENTAL PROTECTION AND CONSERVATION

OUTER CONTINENTAL SHELF MORATORIA ON OIL AND GAS DEVELOPMENT

Congressional Research Service (CRS). May 6, 2011. 19 pages.
http://www.fas.org/sgp/crs/misc/R41132.pdf

Moratoria measures for the outer continental shelf (OCS) establish bans or restrictions on oil and gas exploration and development in federal ocean areas. With some exceptions for marine sanctuaries and monuments, no portion of the federal OCS has a permanent moratorium on oil and gas leasing and development. While some areas are under temporary development bans, such as suspensions or moratoria directed by either legislative or executive powers, most of the OCS is free of such restrictions and is considered permissible for offshore leasing activity. In the aftermath of the Deepwater Horizon oil spill, the regulatory context is unsettled, and policymakers are considering many different offshore program options to restore normalcy in the Gulf region.

THE STATE OF THE BIRDS 2011: REPORT ON PUBLIC LANDS AND WATERS

North American Bird Conservation Initiative, U.S. Committee. May 2011. 48 pages.
http://www.stateofthebirds.org/SOTB_20110504-1200-WEB.pdf

The 2011 State of the Birds report is a collaborative effort as part of the U.S. North American Bird Conservation Initiative, involving federal and state wildlife agencies, and scientific and conservation organizations. These include the American Bird Conservancy, the Association of Fish and Wildlife Agencies, the Bureau of Land Management, the Cornell Lab of Ornithology, the Department of Defense, the National Audubon Society, The Nature Conservancy, the National Park Service, the U.S.D.A. Forest Service, the U.S. Fish and Wildlife Service, and the U.S. Geological Survey. The report concludes that America's public lands and waters, ranging from national wildlife refuges to national parks to national forests, offer significant opportunities to halt or reverse the decline of many species. More than 1,000 bird species inhabit the U.S., 251 of which are federally threatened, endangered, or of conservation concern. The report provides a scientific tool to help public agencies identify the most significant conservation opportunities in each habitat.

ASIAN CARP AND THE GREAT LAKES REGION

Congressional Research Service (CRS). April 15, 2011. 25 pages.
http://www.fas.org/sgp/crs/misc/R41082.pdf

Four species of non-indigenous Asian carp are expanding their range in U.S. waterways, resulting in a variety of concerns and problems. Three species -- bighead, silver, and black carp -- are of particular note, based on the perceived degree of environmental concern. According to the Great Lakes Fishery Commission, Asian carp pose a significant threat to commercial and recreational fisheries of the Great Lakes. Asian carp populations could expand rapidly and change the composition of Great Lakes ecosystems. Current controversy relates to what measures might be necessary and sufficient to prevent movement of Asian carp from the Mississippi River drainage into the Great Lakes through the Chicago

Area Waterway System. Several bills have been introduced in the 112th Congress to direct actions to avoid the possibility of carp becoming established in the Great Lakes.

EPA REGULATIONS: TOO MUCH, TOO LITTLE, OR ON TRACK?
Congressional Research Service (CRS). March 21, 2011. 33 pages.
http://www.fas.org/sgp/crs/misc/R41561.pdf
In the two years since Barack Obama was sworn in as President, the Environmental Protection Agency (EPA) has proposed and promulgated numerous regulations implementing the pollution control statutes enacted by Congress. Critics have reacted strongly. Many, both within Congress and outside of it, have accused the agency of reaching beyond the authority given it by Congress and ignoring or underestimating the costs and economic impacts of proposed and promulgated rules. Republican leaders have promised vigorous oversight of the agency in the 112th Congress, and the House has already voted to overturn specific regulations and to limit the agency's authority. This report provides background information on recent EPA rulemaking to help address these issues. It examines 43 major or controversial regulatory actions taken by or under development at EPA since January 2009, providing details on the regulatory action itself, presenting an estimated timeline for completion of the rule (including identification of related court or statutory deadlines), and, in general, providing EPA's estimates of costs and benefits, where available.

ENVIRONMENTAL PROTECTION AGENCY: MAJOR MANAGEMENT CHALLENGES
Government Accountability Office (GAO). March 2, 2011. 35 pages.
http://www.gao.gov/new.items/d11422t.pdf
The Environmental Protection Agency's (EPA) overarching mission is to protect human health and the environment by implementing and enforcing the laws intended to improve the quality of the nation's air, water, and lands. EPA's policies and programs affect virtually all segments of the economy, society, and government. As such, it operates in a highly complex and controversial regulatory arena. In recent years, GAO's work has identified several significant and persistent challenges across a range of EPA programs and activities and has proposed corrective actions to enable the agency to more effectively accomplish its mission. Based on this work, this testimony highlights some of the major management challenges facing EPA today, the agency's efforts to address them, and the work GAO believes remains to be done.

POLLUTION AND WASTE

CHEMICALS USED IN HYDRAULIC FRACTURING
Minority Staff. Committee on Energy and Commerce. U.S. House of Representatives. April 2011. 32 pages.
http://democrats.energycommerce.house.gov/sites/default/files/documents/Hydraulic%20Fracturing%20Report%204.18.11.pdf
Hydraulic fracturing has opened access to vast domestic reserves of natural gas that could provide an important stepping stone to a clean energy future. Yet questions about the safety of hydraulic fracturing persist, which are compounded by the secrecy surrounding the chemicals used in hydraulic fracturing fluids. This analysis is the most comprehensive national assessment to date of the types and volumes of chemical used in the hydraulic fracturing process. It shows that between 2005 and 2009, the 14 leading

hydraulic fracturing companies in the United States used over 2,500 hydraulic fracturing products containing 750 compounds. More than 650 of these products contained chemicals that are known or possible human carcinogens, regulated under the Safe Drinking Water Act, or listed as hazardous air pollutants.

CLOSING YUCCA MOUNTAIN: LITIGATION ASSOCIATED WITH ATTEMPTS TO ABANDON THE PLANNED NUCLEAR WASTE REPOSITORY
Congressional Research Service (CRS). March 4, 2011. 25 pages.
http://www.fas.org/sgp/crs/misc/R41675.pdf
The Obama Administration, in conjunction with the Department of Energy (DOE), has taken three important steps directed toward terminating the Yucca Mountain project. First, the Administration's FY2011 budget proposal eliminated all funding for the Yucca Mountain project. Second, the President and Secretary of Energy Steven Chu established a Blue Ribbon Commission to consider alternative solutions to the nation's nuclear waste challenge. Third, and most controversial, DOE has attempted to terminate the Nuclear Regulatory Commission's (NRC's) Yucca Mountain licensing proceeding by seeking to withdraw the license application for the Yucca Mountain facility.

FEDERAL OIL AND GAS: INTERAGENCY COMMITTEE NEEDS TO BETTER COORDINATE RESEARCH ON OIL POLLUTION PREVENTION AND RESPONSE
Government Accountability Office (GAO). March 2011. 29 pages.
http://www.gao.gov/new.items/d11319.pdf
Congress passed the Oil Pollution Act (OPA) in 1990. Among other things, OPA established the Interagency Coordinating Committee on Oil Pollution Research to coordinate an oil pollution research program among federal agencies, including developing a plan, having the National Academy of Sciences review that plan, and reporting to Congress on the interagency committee's efforts biennially. The 2010 Deepwater Horizon explosion and fire led to the largest oil spill in U.S. history, raising new concerns about the effects of oil spills. GAO was asked to assess the extent to which the interagency committee has facilitated the coordination of federal agencies' oil pollution research.

SUPERFUND: INFORMATION ON THE NATURE AND COSTS OF CLEANUP ACTIVITIES AT THREE LANDFILLS IN THE GULF COAST REGION
Government Accountability Office (GAO). February 18, 2011. 23 pages.
http://www.gao.gov/new.items/d11287r.pdf
The Environmental Protection Agency (EPA) estimates that one in four Americans lives within 3 miles of a contaminated site, many of which pose serious risks to human health and the environment. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) provided the federal government with authority to respond to releases or threatened releases of hazardous substances and created a trust fund to provide for certain cleanup activities. Under CERCLA, EPA established the Superfund program to address the threats that contaminated sites pose. Although EPA has paid for the cleanup of many of these sites through the Superfund program, funding for these cleanups has diminished in recent years.

AFTERMATH OF THE DEEPWATER HORIZON OIL SPILL

DEEPWATER HORIZON OIL SPILL: HIGHLIGHTED ACTIONS AND ISSUES
Congressional Research Service (CRS). May 11, 2011. 11 pages.
http://www.fas.org/sgp/crs/misc/R41407.pdf
This report highlights actions taken and issues raised as a result of the April 20, 2010, explosion on the Deepwater Horizon offshore drilling rig, and the resulting oil spill in the Gulf of Mexico. Members in the 112th Congress continue to express concerns regarding various oil spill-related policy matters. At least three committees in both the House and the Senate have held hearings on issues associated with the Deepwater Horizon oil spill. Members have introduced multiple proposals that would address various issues, including: the regulatory regime for outer continental shelf (OCS) oil exploration and development activities; the liability and compensation framework created by the 1990 Oil Pollution Act; technological challenges involved with deepwater activities; and response activities (e.g., the use of chemical dispersants) and decision-making.

OIL SPILL LEGISLATION IN THE 112TH CONGRESS
Congressional Research Service (CRS). March 11, 2011. 15 pages.
http://www.fas.org/sgp/crs/misc/R41684.pdf
The 2010 Deepwater Horizon oil spill in the Gulf of Mexico continues to generate interest in a variety of oil spill-related issues. This report summarizes key provisions of selected legislative proposals in the 112th Congress that address oil spill-related policy issues, many of which were raised after the 2010 Deepwater Horizon incident. This report focuses primarily on oil spill policy matters that concern prevention, preparedness, response, liability and compensation, and Gulf restoration.

LIABILITY AND COMPENSATION ISSUES RAISED BY THE 2010 GULF OIL SPILL
Congressional Research Service (CRS). March 11, 2011. 27 pages.
http://www.fas.org/sgp/crs/misc/R41679.pdf
The Deepwater Horizon oil spill raised many issues for policymakers, including the ability of the existing oil spill liability and compensation framework to respond to a catastrophic spill. This framework determines who is responsible for paying for oil spill cleanup costs and the economic and natural resource damages from an oil spill; how these costs and damages are defined (i.e., what is covered?); and the degree to which, and conditions in which, the costs and damages are limited and/or shared by other parties, including general taxpayers.

THINK TANKS AND RESEARCH CENTERS

The opinions expressed in these publications do not necessarily reflect the views of the U.S. Government

FUKUSHIMA DAIICHI INCIDENT AND NUCLEAR HAZARDS

PREVENTING NUCLEAR MELTDOWN: ASSESSING REGULATORY FAILURE IN JAPAN AND THE UNITED STATES
Daniel Kaufmann and Veronika Penciakova. The Brookings Institution. April 1, 2011.

http://www.brookings.edu/opinions/2011/0401_nuclear_meltdown_kaufmann.aspx
Many wonder whether Japan's nuclear disaster could have been averted. The embattled operator of the Fukushima nuclear plant, Tokyo Electric Power Company (TEPCO), has borne the brunt of criticism; its numerous failures over the years are certainly well known. However, Japan's Nuclear and Industrial Safety Agency (NISA), responsible for regulating the nuclear industry, also ought to be subject to particular scrutiny for allowing TEPCO to operate despite its past safety and disclosure violations. The authors thus ask what types of regulatory failure may have contributed to Japan's nuclear crisis and assess whether the U.S. Nuclear Regulatory Commission (NRC) is at risk of committing similar errors.

NUCLEAR POWER SAFETY CONCERNS
Toni Johnson. Council on Foreign Relations. March 30, 2011.
http://www.cfr.org/europerussia/nuclear-power-safety-concerns/p10534
The March 2011 Japanese earthquake and tsunami that severely damaged the Fukushima Daiichi power plant has dampened what had been a renewed interest in nuclear power twenty-five years after the explosion at Chernobyl in northern Ukraine. That interest was sparked by rising energy demands in emerging markets and developing nations as well as the need to reduce use of fossil fuels in response to climate change, making nuclear more attractive though less competitive than other types of power (PDF). But the 2011Fukushima incident has led to new scrutiny of plant safety regulations and emergency measures, and to questions about reactor design and how to deal with spent nuclear fuel. Still, while experts say Fukushima is likely to have some impact on nuclear power going forward, it is unlikely to be as disruptive for the industry as Chernobyl.

FUKUSHIMA: WHAT IT IS AND ISN'T
Sharon Squassoni. Center for Strategic and International Studies (CSIS). March 24, 2011. 2 pages.
http://csis.org/files/publication/110324_Squassoni_Fukushima.pdf
It is tempting to offer lessons learned from the Fukushima crisis, as many observers already have. But the crisis is not yet over, and the full details of how it has unfolded and its ultimate impact are unknown. Japan and the rest of the world, including those countries that operate nuclear power plants and those that are considering an option for nuclear power, will pore over the details in time. It would be more useful at this point to analyze what this crisis is and isn't before deriving lessons, the author argues.

OPPOSITION TO NUCLEAR POWER RISES AMID JAPANESE CRISIS, SUPPORT FOR OFFSHORE OIL AND GAS DRILLING REBOUNDS
Pew Research Center for the People & the Press. March 21, 2011.
http://pewresearch.org/pubs/1934/support-nuclear-power-japan-gas-prices-offshore-oil-gas-drilling
Not surprisingly, public support for the increased use of nuclear power has declined amid the ongoing nuclear emergency in Japan. Currently, 39% say they favor promoting the increased use of nuclear power while 52% are opposed. With the recent surge in gas prices, support for increased offshore oil and gas drilling continues to rebound. Currently, 57% say they favor allowing more offshore oil and gas drilling in U.S. waters while 37% are opposed. The survey also shows that substantial majorities continue to support increased federal funding for research on wind, solar and hydrogen technology (74%), spending more on subway, rail and bus systems (61%), and providing tax incentives for the purchase of hybrid vehicles (58%).

NUCLEAR POWER EXPANSION CHALLENGES
Toni Johnson. Council on Foreign Relations. March 18, 2011.
http://www.cfr.org/united-states/nuclear-power-expansion-challenges/p16886
A major crisis at Japan's Fukushima Daiichi nuclear power plant in March 2011 after a catastrophic earthquake and tsunami has raised new questions about the safety of nuclear power. The scrutiny comes at a time when interest in nuclear power has renewed; global construction of nuclear reactors is rising after a decades-long decline. A number of factors account for this shift, including soaring energy demand in the developing world and the threat of climate change. Most of the new interest in nuclear is occurring outside the United States. Some U.S. policymakers argue nuclear power is a vital part of the country's energy future. But despite legislative efforts and a softening of attitudes toward nuclear power, the U.S. industry has been slow to revive. The Japanese nuclear disaster has underscored many of the safety arguments made against pursuing nuclear power. Nuclear power continues to face a number of other significant obstacles to expansion worldwide, from manpower shortages to high construction costs.

FUKUSHIMA AND THE GLOBAL "NUCLEAR RENAISSANCE"
Nathan Hultman. The Brookings Institution. March 14, 2011.
http://www.brookings.edu/opinions/2011/0314_japan_nuclear_hultman.aspx
Since its inception, civilian nuclear power has held an uneasy and unstable relationship with the people who use its electricity, and the serious and disconcerting problems in Japan's nuclear reactors have struck the core sensitivity of nuclear power: safety. Despite what will almost certainly be a heated discussion about nuclear power in coming months, it is likely that these discussions will affect countries differently. Failures at Fukushima will require a pause to allow public discourse in each country to catch up with the plans. For reasons of energy security or climate change, it may still be that nuclear power is the right option for some countries to pursue. But it is equally clear that the events in Japan will require an honest discussion about risks and requirements for redundancies.

UNACCEPTABLE RISK: TWO DECADES OF "CLOSE CALLS," LEAKS AND OTHER PROBLEMS AT U.S. NUCLEAR REACTORS
Rob Kerth, Tony Dutzik, Travis Madsen and Johanna Neumann. U.S. PIRG Education Fund. March 2011. 23 pages.
http://cdn.publicinterestnetwork.org/assets/abb9e7cc3d68172edb44a6ccccb95345/USP-Unacceptable-Risk.pdf
According to the authors of this report, as the eyes of the world have focused on the nuclear crisis in Fukushima, Japan, Americans have begun to raise questions about the safety of nuclear power plants in the United States. American nuclear power plants are not immune to the types of natural disasters, mechanical failures, human errors, and losses of critical electric power supplies that have characterized major nuclear accidents such as the one at Fukushima Daiichi power plant in Japan. Indeed, at several points over the last 20 years, American nuclear power plants have experienced "close calls" that could have led to damage to the reactor core and the subsequent release of large amounts of radiation. These incidents illustrate the inherent dangers of nuclear power to people and the environment, and demonstrate why the United States must move away from nuclear power and toward safer alternatives, the authors claim.

CLIMATE CHANGE -- GLOBAL ISSUES

GOVERNING GEOENGINEERING RESEARCH: A POLITICAL AND TECHNICAL VULNERABILITY ANALYSIS OF POTENTIAL NEAR-TERM OPTIONS
Robert J. Lempert and Don Prosnitz. Rand Corporation. April 19, 2011. 95 pages.
http://www.rand.org/content/dam/rand/pubs/technical_reports/2011/RAND_TR846.pdf
Geoengineering, the large-scale, persistent, intentional altering of the globe's climate, is increasingly mentioned as a potential response to climate change. But evaluating the risks associated with any policy toward geoengineering confronts deep uncertainties concerning not only the desirability of deploying such systems but also the consequences of conducting research and large-scale experiments on climate modification. This report demonstrates a decision framework for conducting a risk analysis under such conditions of deep uncertainty. It also provides an initial evaluation of alternative near-term policies the U.S. government might pursue regarding the governance of geoengineering research.

DESIGNING THE INTERNATIONAL GREEN CLIMATE FUND: FOCUSING ON RESULTS
Katherine Sierra. The Brookings Institution. April 2011. 23 pages.
http://www.brookings.edu/~/media/Files/rc/papers/2011/0425_green_climate_fund_sierra/0425_green_climate_fund_sierra.pdf
At the December 2010 international climate talks in Cancún, the negotiators agreed to create a Green Climate Fund. The Cancún decision called for this fund to be established as an operating entity of the financial mechanism of the UN Framework Convention on Climate Change (UNFCCC), accountable to and functioning under the guidance of the Conference of the Parties (COP) to the UNFCCC. It would have thematic windows, with a significant share of new multilateral funding for adaptation expected to flow through it. The fund would be governed by a board of 24 members, with equal representation from developing and developed countries. An independent secretariat would support the fund's operations, with the World Bank invited to be the trustee to manage the fund's financial assets, subject to review in three years. A Transitional Committee made up of representatives from 25 developing and 15 developed countries was commissioned to design the Green Climate Fund. It was asked to submit its recommendations for approval at COP 17 in Durban, in December 2011.

POPULATION AND ENVIRONMENT CONNECTIONS: THE ROLE OF U.S. FAMILY PLANNING ASSISTANCE IN U.S. FOREIGN POLICY
Geoffrey D. Dabelko. Council on Foreign Relations. April 2011. 25 pages.
http://i.cfr.org/content/publications/attachments/CFR_WorkingPaper6_Dabelko.pdf
The demands of a rapidly growing global population are increasingly straining supplies of food, energy, and water. The U.S. government and multilateral organizations should recognize the connections between resource demand, resource supply, and resource degradation because these factors can have a detrimental effect upon the success of strategic U.S. foreign policy goals. This Working Paper seeks to nuance mainstream conceptualizations of population-environment linkages and attempts to focus policymakers' attention on the need for integrated population, health, and environmental (PHE) approaches within U.S. foreign policy.

THE YEAR OF LIVING DANGEROUSLY: 2010 EXTREME WEATHER COST LIVES, HEALTH, ECONOMY
Daniel J. Weiss, Valeri Vasquez and Ben Kaldunski. Center for American Progress. April 2011. 34 pages.

http://www.americanprogress.org/issues/2011/04/pdf/extreme_weather.pdf
Last year, unprecedented extreme weather led to a record number of disaster declarations by the Federal Emergency Management Agency. The United States and the world were swept by flooding, severe winter storms, heat waves, droughts, hurricanes, and tornadoes. The extreme weather of 2010 exacted a huge human and economic toll. Scientists agree that the string of disastrous weather extremes this past year are the types of severe weather that will become more frequent or ferocious as the planet continues to warm. The purpose of this report is to gather, condense, and synthesize some of the massive amount of data about extreme weather and its links to global warming. This summary of climate science can help provide context to the recent surge in extreme weather events. In this report the authors will catalogue the extreme U.S. weather in 2010 and then examine the consequences on health and on the economy.

FIND ME THE MONEY: FINANCING CLIMATE AND OTHER GLOBAL PUBLIC GOODS
Nancy Birdsall and Benjamin Leo. Center for Global Development. Working Paper 248. April 2011. 52 pages.
http://www.cgdev.org/files/1424979_file_Birdsall_Leo_Find_Me_the_Money_FINAL.pdf
The global community faces a number of critical challenges ranging from climate change to crossborder health risks to natural-resource scarcities. Many of these so-called global commons problems carry grave risks to economic growth in the developing world and to the livelihoods and welfare of their people. Climate change is the classic example. Despite the risks involved, donor governments have funded programs addressing global challenges such as climate change at far lower levels than traditional programs of country-based development assistance. The prospects for dealing with such global challenges will depend at least in part on new collective financing mechanisms. In this paper, the authors recommend that willing governments utilize a modest portion of their existing SDR allocations to capitalize a third-party financing entity. This entity would offer bonds on international capital markets backed by its SDR reserves. The proceeds would back private investment in climate-mitigation projects in developing countries that might otherwise lack adequate financing. This approach could mobilize up to $75 billion at little or no budgetary cost for contributing governments. Any limited budgetary costs could be offset by using excess proceeds from recent IMF gold sales.

THE CLEAN DEVELOPMENT MECHANISM: A REVIEW OF THE FIRST INTERNATIONAL OFFSET PROGRAM
Michael Gillenwater and Stephen Seres. Pew Center on Global Climate Change. March 2011. 56 pages.
http://www.pewclimate.org/docUploads/clean-development-mechanism-review-of-first-international-offset-program.pdf
The Clean Development Mechanism (CDM), established under the Kyoto Protocol, is the primary international offset program in existence today, and while not perfect, it has helped to establish a global market for greenhouse gas (GHG) emission reductions. It generates offsets through investments in GHG reduction, avoidance, and sequestration projects in developing countries. The United States is not party to the Kyoto Protocol, but was instrumental in negotiating the treaty and championing market mechanisms as a way to achieve the targeted reductions at lower cost. The CDM has managed to establish -- in its relatively short eight years of existence -- a credible, internationally-recognized, $2.7 billion carbon offset market with participation from a large number of developing countries and private investors. It has also created processes and methodologies that other programs are already emulating.

A GREEN VENTURE FUND TO FINANCE CLEAN TECHNOLOGY FOR DEVELOPING COUNTRIES
Darius Nassiry and David Wheeler. Center for Global Development. Working Paper 245. March 2011. 40 pages.
http://www.cgdev.org/files/1424899_file_Nassiry_Wheeler_Green_Venture_Fund_FINAL.pdf
Climate negotiators in Cancún reached agreement that long-term climate finance will include a commitment by developed countries to mobilize US$ 100 billion per year to help developing countries combat climate change. However, that level of investment will require substantial capital from private investors, particularly for innovation and commercialization. The authors propose a public-private green venture fund (GVF) to promote development and deployment of low-carbon technologies for developing countries. The GVF will use a fund of funds model backed by public "cornerstone" equity. In this paper, the authors propose a structure for the GVF and explain the design rationale, operating principles and key parameters for two funds of funds for technology innovation and deployment. They also highlight some key issues to be considered, including differential treatment of public and private investors and possible approaches to setting technology priorities.

THE CLIMATE HAS CHANGED -- SO MUST POLICY
Raymond J. Kopp. Resources for the Future. March 2011. 16 pages.
http://www.rff.org/RFF/Documents/RFF-IB-11-03.pdf
This year marks the 20th anniversary of the United Nations Framework Convention on Climate Change (UNFCCC). The lack of progress has opened the treaty to scrutiny, criticism, and even derision. Perhaps 20 years is insufficient time for such a difficult problem to be solved, and hard work over the next decade will bear fruit. Or perhaps no real progress can ever made under the treaty, and we must adapt to a significantly altered climate. Or, the author suggest, climate policy will evolve and become integrated within the broader economic and political considerations of individual nations. The purpose of this brief is to explore the evolution of international efforts to formulate global climate policy. It is not the author's intention to suggest what the path forward ought to be, but rather, what the path might likely be, given the global economic and political forces shaping the foreign policies of the major nations.

CLIMATE CHANGE -- DOMESTIC ISSUES

IS A CLEAN ENERGY STANDARD A GOOD WAY TO MOVE U.S. CLIMATE POLICY FORWARD?
Ian W.H. Parry and Alan J. Krupnick. Resources for the Future. April 2011. 10 pages.
http://www.rff.org/RFF/Documents/RFF-IB-11-04.pdf
Following the failure in 2010 to pass a comprehensive cap-and-trade bill to reduce carbon dioxide (CO2) and other greenhouse gas emissions, the Obama Administration and some in Congress are now focused, in particular, on a clean energy standard (CES). Under this approach, electricity producers would be required to meet a rising fraction of their generation using zero carbon sources or sources with lower carbon intensity (CO2 emissions per kilowatt-hour [kWh]) than that of coal generation. Although a CES would lower the carbon intensity of the power sector, it is typically viewed as a second-best approach relative to a well-designed, economy-wide cap-and-trade policy, as the latter promotes a broader range of behavioral responses to reduce CO2 emissions across all sectors of the economy. The authors argue, however, that in some important economic and practical regards a CES may be a better first step than the cap-and-trade proposals floated in Congress.

EMISSIONS TARGETS AND THE REAL BUSINESS CYCLE: INTENSITY TARGETS VERSUS CAPS OR TAXES

Carolyn Fischer and Michael Springborn. Resources for the Future. April 2011. 34 pages.
http://www.rff.org/RFF/Documents/RFF-DP-09-47-REV.pdf

For reducing greenhouse gas emissions, intensity targets are attracting interest as a flexible mechanism that would better allow for economic growth than emissions caps. For the same expected emissions, however, the economic responses to unexpected productivity shocks differ. Using a real business cycle model, the authors find that a cap dampens the effects of productivity shocks in the economy on all variables except for the shadow value of the emissions constraint. An emissions tax leads to the same expected outcomes as a cap but with greater volatility. Certainty-equivalent intensity targets maintain higher levels of labor, capital, and output than other policies, with lower expected costs and no more volatility than with no policy.

CLIMATE COMPARED: PUBLIC OPINION ON CLIMATE CHANGE IN THE UNITED STATES AND CANADA

Christopher P. Borick, Erick Lachapelle and Barry G. Rabe. The Brookings Institution. April 2011. 13 pages.
http://www.brookings.edu/~/media/Files/rc/papers/2011/04_climate_change_opinion/04_climate_change_opinion.pdf

This report summarizes results drawn from national level surveys in the United States and Canada that examine public perceptions regarding various aspects of climate change. Since 2008, the National Survey of American Public Opinion on Climate Change (NSAPOCC) has examined the perceptions and preferences of residents of the United States regarding their views on the existence of climate change and potential policy approaches to address global warming. In order to gain comparative perspective on climate change matters in Canada, the National Survey of Canadian Public Opinion on Climate Change (NSCPOCC) accompanied the most recent version of the NSAPOCC. This report provides insight into the evolution of American public opinion regarding climate matters while producing direct comparisons between the views of the American and Canadian publics on matters pertaining to climate change and its mitigation.

WHAT'S AHEAD FOR POWER PLANTS AND INDUSTRY? USING THE CLEAN AIR ACT TO REDUCE GREENHOUSE GAS EMISSIONS, BUILDING ON EXISTING REGIONAL PROGRAMS

Franz T. Litz, Nicholas M. Bianco, Michael B. Gerrard and Gregory E. Wannier. World Resources Institute. February 2011. 32 pages.
http://pdf.wri.org/working_papers/whats_ahead_for_power_plants_and_industry.pdf

In the absence of congressional action on climate change, all eyes are on the states and the United States Environmental Protection Agency (EPA) to see how they will regulate greenhouse gas emissions from existing large power plants and industrial facilities. Indeed, power plants and industrial facilities are the sources of half of all U.S. greenhouse gas emissions, making those plants and facilities central to any effort to reduce the country's total emissions. This working paper explores a promising pathway for the states and EPA to make these reductions using the standards of performance under section 111 of the Clean Air Act.

HOW U.S. FEDERAL CLIMATE POLICY COULD AFFECT CHEMICALS' CREDIT RISK
World Resources Institute. February 2011. 40 pages.
http://pdf.wri.org/how_us_federal_climate_policy_could_affect_chemicals_credit_risk.pdf
Any significant federal action to address climate change would likely be most relevant for subsectors of the U.S. chemicals industry that have significant greenhouse gas (GHG) emissions or a high dependence on natural gas- or oil-derived raw materials. Almost half of the 2007 value of shipments of the $724 billion U.S. chemicals manufacturing industry -- mostly commodity chemicals -- fit this description. This study examines how climate change policy drivers could be incorporated into the evaluation of credit quality. It analyzes two types of federal climate policy scenarios -- a market-based GHG emissions reduction policy as approximated by the American Power Act (APA), and Environmental Protection Agency (EPA) regulation of greenhouse gas emissions (GHG) -- in the context of 13 energy-intensive chemicals subsectors.

GREEN TECHNOLOGIES

SUMMER GAS PRICES: BEATING THE HEAT WITH CLEAN CARS
John Cross and Elizabeth Riddlington. Environment America Research & Policy Center. May 2011. 18 pages.
http://www.environmentamerica.org/uploads/42/96/4296137910cb5ca2b49f9dd76cae22b1/Summer-Gas-Prices-Report-May-2011.pdf
Rapidly rising gas prices across the U.S. are shining a spotlight on the dire consequences of America's dependence on oil. Requiring automobile manufacturers to meet strong global warming pollution and fuel efficiency standards represents the greatest opportunity to cut America's oil consumption, reduce global warming pollution from the transportation sector, and deliver important economic benefits to both consumers and businesses -- including saving Americans billions of dollars at the pump. This analysis finds that if U.S. cars and trucks today met a 60 mpg standard, Americans would save $67 billion at the gas pump and cut gasoline consumption by 17 billion gallons this summer.

MARKING EARTH DAY WITH A CALL FOR GREEN SCHOOLS
Allison Anderson. The Brookings Institution. April 21, 2011.
http://www.brookings.edu/opinions/2011/0421_earth_day_anderson.aspx
As we celebrate Earth Day this year, enormous global environmental challenges still loom and reducing greenhouse gas (GHG) emissions continues to be a major international concern. One way to reduce GHGs and combat climate change is to infuse green technology and environmentally sustainable practices into building design, construction, maintenance and operations. With millions of schools around the world, ensuring that they are environmentally sustainable is one important way for the global education community to make a contribution to climate change mitigation efforts.

BREAKING THE HABIT: ELIMINATING OUR DEPENDENCE ON OIL FROM THE GULF OF MEXICO BY 2020, THE PERSIAN GULF BY 2023, AND ALL OTHER NATIONS BY 2033
Michael Craig and Simon Mahan. Oceana. April 2011. 29 pages.
http://na.oceana.org/sites/default/files/reports/OceanaVision2030_4-19-11.pdf
Reducing U.S. consumption of oil, especially by eliminating the need to drill in the Gulf of Mexico and import oil from the Persian Gulf, would be a huge step towards a safer, healthier and more prosperous

nation. This is a step that can now be taken thanks to technological advances in four key petroleum-consuming sectors: shipping, residential and commercial heating, electricity generation and light-duty vehicle transportation. By making improvements in each of these sectors, U.S. dependence on Gulf of Mexico oil could be alleviated by 2020 without increasing oil imports. Further improvements could free the U.S. from needing to import oil from the Persian Gulf by 2023, and ultimately, all other oil imports could be eliminated by 2033. This paper presents a vision of how these crucial goals could be achieved.

LIGHTING EFFICIENCY
Pew Center on Global Climate Change. April 2011. 13 pages.
http://www.pewclimate.org/docUploads/LightingEfficiency.pdf
Lighting accounts for about 11 percent of energy use in residential buildings and 18 percent in commercial buildings. Both conserving lighting use and adopting more efficient technologies can yield substantial energy savings. Some of these technologies and practices have no up-front cost at all, and others pay for themselves over time in the form of lower utility bills. New lighting technologies are many times more efficient than traditional technologies such as incandescent bulbs, and switching to newer technologies can result in substantial net energy use reduction, and associated reductions in greenhouse gas emissions.

BUILDING ENVELOPE
Pew Center on Global Climate Change. April 2011. 7 pages.
http://www.pewclimate.org/docUploads/BuildingEnvelope.pdf
Residential and commercial buildings account for almost 39 percent of total U.S. energy consumption and 38 percent of U.S. carbon dioxide (CO2) emissions. Space heating, cooling, and ventilation account for the largest amount of end-use energy consumption in both commercial and residential buildings. In the commercial sector they are responsible for 34 percent for energy used on site and 31 percent of primary energy use. In the residential sector, space heating and cooling are responsible for 52 percent of energy used on site, and 39 percent of primary energy use. The building envelope -- the interface between the interior of the building and the outdoor environment, including the walls, roof, and foundation -- serves as a thermal barrier and plays an important role in determining the amount of energy necessary to maintain a comfortable indoor environment relative to the outside environment.

CUTTING CARBON COSTS: LEARNING FROM GERMANY'S ENERGY SAVING PROGRAM
Anne Power and Monika Zulauf. The Brookings Institution. March 2011. 17 pages.
http://www.brookings.edu/~/media/Files/rc/papers/2011/0317_germany_energy_power_zulauf/0317_germany_energy_power_zulauf.pdf
Energy shortages, unpredictable and high energy prices, waste, pollution, and fears of climate change all drive a sense of urgency in the West about reducing its energy dependence on unreliable sources. Europe imports over half its total energy from volatile producers around the globe. While the United States is able to meet somewhat more of its energy demand from domestic sources, its per capita energy consumption level is twice that of Europe's. Germany is leading the way in developing "green" technologies and has the most ambitious energy-saving program in Europe. Germany's experience -- its successes and lessons learned -- provide a solid evidence base from which nations like the United States can "leapfrog" Europe, and tackle even more pressing energy and climate change demands through deliberate public and private action.

SAFER BY DESIGN: BUSINESSES CAN REPLACE TOXIC INGREDIENTS THROUGH GREEN CHEMISTRY

Travis Madsen, Benjamin Davis, Shelley Vinyard and John Rumpler. Environment America Research & Policy Center. February 2011. 45 pages.

http://www.environmentamerica.org/uploads/27/db/27db4a11521ca80bf2efd5c4769e0bee/Safer-by-Design.pdf

The widespread use of toxic chemicals -- in everything from industrial plants to baby bottles -- is threatening health and environment. But it doesn't have to be that way. Leading American businesses are showing that they can reduce or eliminate the use of toxic chemicals, keeping them out of our air, water, land and food. Through innovation, businesses can design manufacturing processes and products to be safe, following the principles of green chemistry. This report highlights 14 businesses that are identifying unnecessary hazards in their facilities, in their manufacturing processes and in the products they sell -- and acting to eliminate them. In the process, these businesses are creating green jobs and strengthening the economy.

MANAGING RESIDENTIAL ENERGY DEMAND THROUGH PROVISION OF BETTER FEEDBACK

Myles T. Collins. Rand Corporation. February 2011. 161 pages.

http://www.rand.org/content/dam/rand/pubs/rgs_dissertations/2011/RAND_RGSD277.pdf

New and affordable technology for providing detailed feedback on household electricity usage presents a host of opportunities for utilities and policy-makers to manage demand. This dissertation examines ways to use these devices to reduce -- and shift the timing of -- energy use in the residential sector by influencing consumers' behavior. The first portion of the study analyzes the impact of programmable thermostats on energy use, focusing on residents' knowledge of climate control settings in the dwelling. The main portion of the dissertation focuses specifically on the potential for better feedback on electricity usage to reduce household energy consumption. This study also examines how energy consumption devices should display feedback on greenhouse gas emissions from electricity use under a real-time pricing program. Finally, this dissertation explores ways to maximize the effect of feedback by evaluating which appliances may be best suited for appliance-specific feedback.

ENVIRONMENTAL PROTECTION AND CONSERVATION

A BETTER APPROACH TO ENVIRONMENTAL REGULATION: GETTING THE COSTS AND BENEFITS RIGHT

Ted Gayer. The Brookings Institution. May 2011. 27 pages.

http://www.brookings.edu/~/media/Files/rc/papers/2011/05_environment_regulation_gayer/05_environment_regulation_gayer_paper.pdf

Cost-benefit analysis of environmental regulation plays a key role in determining how to achieve our environmental goals without imposing unnecessary costs on the economy. This paper proposes three reforms that address several problems that undermine the role played by cost-benefit analysis in environmental regulation. First, agencies should be required to use a checklist of good empirical practices and should promote decentralized evaluations of data and research. Second, absent compelling systematic evidence to the contrary, agencies should presume that consumers are best able to make their own energy-saving decisions, and should focus on regulations that address the harm that people impose

on others. Third, a six-month early regulatory review process should be established for particularly important regulations to allow sufficient time for a thorough cost-benefit analysis and the incorporation of the results into the final regulations.

PROTECTING THE OREGON COAST: IDENTIFYING AND PROTECTING IMPORTANT ECOLOGICAL AREAS
Oceana. May 2011. 36 pages.
http://na.oceana.org/sites/default/files/reports/Oceana_IEAs_v6.pdf
Home to gray whales, salmon, puffins, and life giving swarms of krill, the Pacific Ocean off Oregon is one of the richest temperate marine ecosystems in the world. Yet like much of the world's oceans, Oregon's coastal and ocean ecosystems are facing increasing threats, including ocean warming, acidification, overfishing, pollution and development. Increasing human uses of oceans and coasts have lead to steep declines in fish and wildlife populations and habitat loss that threatens the long-term sustainability of biological resources. Identifying Important Ecological Areas (IEAs) is a critical first step in coastal marine spatial planning, helping to improve the health of ocean ecosystems and plan for long-term sustainable uses. This report presents the scientific basis and Geographic Information System (GIS) analysis used to identify IEAs off the Oregon coast, the design of an ecologically significant network of marine reserves and protected areas, and the state policy framework shaping ongoing conservation planning.

FUNDING FOR FORESTS: THE POTENTIAL OF PUBLIC BALLOT MEASURES
Craig Hanson and Logan Yonavjak. World Resources Institute. April 2011. 12 pages.
http://pdf.wri.org/funding_for_forests.pdf
A variety of measures exist to prevent deforestation or forest conversion to other land uses. Some of these measures, such as purchasing land outright for conservation or purchasing conservation easements, are designed to permanently protect forests by precluding future residential or commercial development on the tract of land. But these approaches all require money. One approach to raising large-scale funding for conservation purposes is the conservation-related ballot measure. Citizens vote for such measures at the state, county, or municipal level to approve new public funding dedicated to conservation for a wide variety of purposes, including protection of natural landscapes, bodies of water, and/or farmland. Ballot measures are a means of securing citizen approval for raising public funds for conservation. The funds are then generated through various mechanisms, such as bonds, taxes, and lottery proceeds.

ECOSYSTEM SERVICES: QUANTIFICATION, POLICY APPLICATIONS, AND CURRENT FEDERAL CAPABILITIES
Lynn Scarlett and James Boyd. Resources for the Future. March 2011. 78 pages.
http://www.rff.org/RFF/Documents/RFF-DP-11-13.pdf
Natural systems such as wetlands, sea marshes, free-flowing rivers, forests, and grasslands provide services such as water purification, coastal storm and flood protection, and air pollution mitigation that benefit human communities. Yet the connection between ecosystems and these services is sometimes neither readily apparent nor easy to measure and translate into market investments. As a result, these ecosystem services are often not taken into account in decisions about land, water, and resource management and use. This neglect has resulted in underinvestment in environmental protection and corresponding losses of natural system functions and their benefits to human communities.

FORESTS AT WORK: A NEW MODEL FOR LOCAL LAND PROTECTION
John Talberth and Logan Yonavjak. World Resources Institute. March 2011. 16 pages.
http://pdf.wri.org/forests_at_work.pdf
To date, traditional public land acquisition programs have played a relatively small role in the conservation and sustainable management of southern U.S. forests. The South trails behind other U.S. regions in both the percent of the land base and the acres per capita conserved in parks, wildlife refuges, wilderness, and other protective categories. Working forests offer a new model for scaling up the amount of publicly protected forestland in the South. "Working forests" are defined as forests that are actively managed to generate revenue from multiple sources, including sustainably produced timber and other ecosystem services, and thus are not converted to other land uses such as residential development.

REEFS AT RISK REVISITED
Lauretta Burke, Katie Reytar, Mark Spalding and Allison Perry. World Resources Institute. February 2011. 130 pages.
http://pdf.wri.org/reefs_at_risk_revisited.pdf
This report provides a detailed assessment of the status of and threats to the world's coral reefs. It evaluates threats to coral reefs from a wide range of human activities, and includes an assessment of climate-related threats to reefs. It also contains a global assessment of the vulnerability of nations and territories to coral reef degradation.

FORESTS FOR WATER: EXPLORING PAYMENTS FOR WATERSHED SERVICES IN THE U.S. SOUTH
Craig Hanson, John Talberth and Logan Yonavjak. World Resources Institute. February 2011. 16 pages.
http://pdf.wri.org/forests_for_water.pdf
The forested watersheds of the southern United States provide a number of benefits -- including water flow regulation, flood control, water purification, erosion control, and freshwater supply -- to the region's citizens, communities, and businesses. The loss and degradation of forests can reduce their ability to provide these watershed-related ecosystem services. Payments for watershed services provide landowners financial incentives to conserve, sustainably manage, and/or restore forests specifically to provide one or more watershed-related ecosystem services. Such payments typically involve downstream beneficiaries paying upstream forest owners or forest managers.

POLLUTION AND WASTE

WE ARE WHAT WE BREATHE: THE IMPACTS OF AIR POLLUTION ON EMPLOYMENT AND PRODUCTIVITY
Michael Greenstone and Adam Looney. The Brookings Institution. May 6, 2011.
http://www.brookings.edu/opinions/2011/0506_jobs_greenstone_looney.aspx?p=1
Many factors affect America's long-term employment and productivity, some more obviously than others. As noted in previous papers, an educated workforce, technological innovation, and well-functioning infrastructure are important drivers of job growth. But another factor that impacts our health,

and therefore our productivity, is the environment -- more specifically, the air we breathe on a day-to-day basis. In this posting, the authors examine the employment and productivity costs of air pollution, measuring its health effects on America's workforce.

DIRTY ENERGY'S ASSAULT ON OUR HEALTH: OZONE POLLUTION
Lauren Randall. Environment America Research & Policy Center. March 2011. 68 pages.
http://www.environmentamerica.org/uploads/8d/4d/8d4da06fb08cf56e8129ea2795b3c698/EnvAmerica-OzonePollutionReport-Mar2011.pdf
Dirty energy pollutes the air we breathe, threatening our health and our environment. When power plants burn coal, oil or gas, they create the ingredients for ground-level ozone pollution, one of the main components of "smog" pollution. Especially on hot summer days, across wide areas of the United States, ozone pollution reaches levels that are unhealthy to breathe, putting our lives at risk. In 2009, U.S. power plants emitted more than 1.9 million tons of ozone-forming nitrogen oxide pollution into the air. In order to better protect public health, the United States Environmental Protection Agency (EPA) should issue a new air quality standard to reduce ground-level ozone pollution.

GROWING UP TOXIC: CHEMICAL EXPOSURES AND INCREASES IN DEVELOPMENTAL DISEASE
Travis Madsen and Elizabeth Hitchcock. U.S. PIRG Education Fund. March 2011. 97 pages.
http://cdn.publicinterestnetwork.org/assets/a0d232c3a1b4d08c3e6f338932ec33d9/1Growing-Up-Toxic-Update-final-word-version_us.pdf
According to the authors of this report, a growing body of scientific evidence shows that the widespread use of chemicals harms our health and the health of our children. The incidence of many serious health problems -- including premature birth, learning disabilities, behavioral disorders, asthma and allergies, early puberty, obesity, diabetes, reduced fertility, and some types of cancer -- shows links with exposure to chemicals that can interfere with the process of growth and development. In this report, the authors tell the story of the insidious impact of toxic chemicals, from the plastic ingredient bisphenol A to pesticides, drawing on evidence from more than 200 peer-reviewed scientific papers.

TAR SANDS PIPELINES SAFETY RISKS
Natural Resources Defense Council, National Wildlife Federation, Pipeline Safety Trust and Sierra Club. February 2011. 16 pages.
http://www.nrdc.org/energy/files/tarsandssafetyrisks.pdf
Tar sands crude oil pipeline companies may be putting America's public safety at risk. Increasingly, pipelines transporting tar sands crude oil into the United States are carrying diluted bitumen or "DilBit" -- a highly corrosive, acidic, and potentially unstable blend of thick raw bitumen and volatile natural gas liquid condensate -- raising risks of spills and damage to communities along their paths. The impacts of tar sands production are well known. Tar sands extraction in Canada destroys Boreal forests and wetlands, causes high levels of greenhouse gas pollution, and leaves behind immense lakes of toxic waste. Less well understood, however, is the increased risk and potential harm that can be caused by transporting the raw form of tar sands oil (bitumen) through pipelines to refineries in the United States.

AFTERMATH OF THE DEEPWATER HORIZON OIL SPILL

REVISITING THE GULF OF MEXICO OIL SPILL
Nathan Hultman. The Brookings Institution. April 20, 2011.
http://www.brookings.edu/opinions/2011/0420_gulf_spill_hultman.aspx
One year ago today, a series of human and technical mistakes led to a failure of a piece of oil drilling equipment approximately 5,000 feet below sea level in the Gulf of Mexico. The resulting spill released over 4 million barrels of oil into the Gulf over the ensuing three months -- roughly triple the amount spilled in the Exxon Valdez accident in Alaska. One year later, the true costs and impacts of the spill remain frustratingly unclear. There are four overarching priorities that remain: regulatory reform; redundancy and its limits; emergency response measures; and long-term scientific research. Together, these priorities can serve to reduce the likelihood and eventual impacts of any future spills.

THE BP OIL DISASTER AT ONE YEAR: A STRAIGHTFORWARD ASSESSMENT OF WHAT WE KNOW, WHAT WE DON'T, AND WHAT QUESTIONS NEED TO BE ANSWERED
The Natural Resources Defense Council. April 2011. 20 pages.
http://www.nrdc.org/energy/files/bpoildisasteroneyear.pdf
April marks the passing of one year since the Deepwater Horizon drilling rig exploded over a BP well, killing 11 workers and opening a gusher that spewed some 170 million gallons of toxic crude oil and 200,000 metric tons of methane gas into the Gulf of Mexico. The harm has been widespread -- to the people, to the environment, and to the wildlife of the region. And we are only beginning to understand what the medium- and long-term effects may be. This paper offers a straightforward analysis of key issues surrounding the health of the Gulf, its wildlife, and the communities that depend on both for their own survival.

THE LONG ROAD TO RECOVERY: WETLANDS AND WILDLIFE ONE YEAR INTO THE GULF OIL DISASTER
National Wildlife Federation. April 2011. 11 pages.
http://www.nwf.org/common/pdf/NWF_WildlifeWetlandsStatusReport_4-11.pdf
The Deepwater Horizon explosion killed 11 people, with the ensuing spill releasing more than 200 million gallons of oil and significant quantities of hydrocarbon gas. Thousands of birds, hundreds of endangered sea turtles and dozens of dolphins were found dead in the disaster zone. Experience with other disastrous oil spills tells us that the damage is far from over. In fact, other oil spill disasters have taken years to reveal their full effects and often recovery is still not complete after decades. This report gives a snapshot view of the current status of coastal wetlands and five wildlife species (or groups of species) that depend on a healthy Gulf. The report outlines their historical status, the oil spill impact from a one-year perspective, and likely future trends.